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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,530	01/22/2002	David L. Wortman	51806US008	2971

32692 7590 01/02/2004

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EXAMINER

LEE, GUIYOUNG

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/051,530	WORTMAN ET AL.	
	Examiner	Art Unit	
	Guiyoung Lee	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 and 25 is/are allowed.
- 6) ☒ Claim(s) 1-23, 26, 28-35 and 45-53 is/are rejected.
- 7) ☒ Claim(s) 27 and 36-44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of the Amendment filed October 23, 2003.

Drawings

2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on October 23, 2003 have been approved.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-23, 26, 28-35 and 45-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishio et al. (USPT 5,598,280) in view of Schrenk et al. (USPT 5,448,404) cited by Applicant.

Re claims 1-9, 14-23, and 45-53: Nishio discloses a backlight system having,

- a light guide (2 in Fig. 5) defining a back surface;
- a light source (3) optically connected to the light guide, the light source emitting light into the light guide;
- a back reflector proximate the back surface of the light guide, the back reflector comprising a multiplayer optical film (col. 8, lines 38-52).

Nishio does not disclose that the multiplayer optical film reflects at least about 80 % of normal light and at least 80 % of light incident at an angle of 60 degrees from normal. However, Schrenk teaches multiplayer film having at least 80 % reflectivity (col. 3, lines 37-39). Further, Schrenk

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teaches that the number of layers is generally increased to 1000 or more layers for greater reflectivity of 90 % and above (col. 9, lines 57-59). It would have been obvious to one having ordinary skill in the art at the time of the invention to substitute Schrenk's multilayer film having 100 % reflectivity (col. 14, line 58) with Nishio's multiplayer film because Schrenk's multiplayer film may increase reflectivity by adding more layers on the film. Further, Schrenk defines that reflectance measurement refers to reflectance of light rays into an emergent cone with a vertex angle of 15 degrees centered around the specula angle (col. 3, lines 12-15).

Although Schrenk does not disclose light incident angle of 60 degrees from normal, it would have been obvious to one having ordinary skill in the art at the time of the invention to make Nishio's multiplayer film having at least about 99 % of the light incident at an angle of 60 degrees from normal because Nishio's multiplayer film can increase reflectivity at an angle of 60 degrees from normal by adding more layers on the film.

Re claims 10-12: Schrenk teaches diffusing particles located on a surface of the multiplayer optical film (coloring agent in col. 4, lines 45-60)

Re claim 13: Schrenk teaches a diffusing film (a third polymer layer in col. 5, lines 13-25).

Re claim 26, 28-32: Schrenk teaches a first layer comprising an oriented birefringent polymer which has been stretched in two in-plane directions, the first layer having an average thickness between 190 nm and 1700 nm and a second layer of a selected second polymer, each second layer having an average thickness between 190 nm and 1700 nm (col. 4, lines 29-41).

Re claim 33-35: Schrenk teaches a refractive index of one polymer is at least about 0.03 (col. 5, line 50).

Allowable Subject Matter

5. Claims 24-25 are allowed.
6. Claims 27 and 36-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 24-25, the prior art of record, Nishio and Schrenk, fail to disclose a backlight system having a lamp cavity reflector located about at least a portion of the light source, the lamp cavity reflector directing light from light source generally towards an edge of the light guide, the lamp cavity reflector further comprising the multiplayer optical film, as set forth in the claim. With regard to claims 27 and 36-44, Schrenk does not disclose that the first layer of the multiplayer optical film comprises crystalline naphthalene dicarboxylic acid polyester.

Response to Arguments

6. Applicant's arguments, see Page 4, lines 5-13, filed October 23, 2003, with respect to the rejection(s) of claim(s) 1-9, 14, 24, 26, 28-32, and 45-53 under 35 U.S.C. 103(a) as obvious in view of Whitehead (USPT 5,661,839) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Nishio et al. (USPT 5,598,280) and Schrenk et al. (USPT 5,448,404).
7. The indicated allowability of claims 10-13, 15-23, 25, 27, and 33-44 is withdrawn in view of the newly discovered reference(s) above

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8. Applicant's arguments, see Pages 3-4, filed October 23, 2003, with respect to claim rejections under U.S.C. 112, second paragraph, have been fully considered and are persuasive. The rejections under U.S.C. 112, second paragraph, of May/29/2003 have been withdrawn.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Guiyoung Lee** whose telephone number is (703) 308-8567. The examiner can normally be reached between the hours of 8:00 AM to 3:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea, can be reached on (703) 305-4939. The fax phone number for this Group is (703)872-9306. The Right Fax phone number for the examiner is (703)746-4766.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**Guiyoung.lee@uspto.gov**].

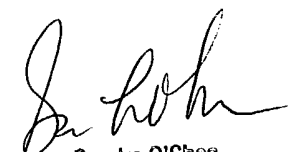
All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

GYL

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12/27/2003


Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800